Proposed MCP Regulation Changes

Waste Site Cleanup Advisory Committee
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Elizabeth Callahan, MA DEP
elizabeth.j.callahan@state.ma.us
(617)348-4056

Two Public Hearing Drafts

- MCP "Wave 2"
- Asbestos in Soil (includes amendments to MCP, Solid Waste Management and Air Quality regulations)
  - MCP revisions related to Asbestos in Soil appear in both regulatory packages

Today's Presentations re: Public Hearing Drafts

- ⇨ Liz Callahan
  - MCP amendments (schedule and proposals, except Numeric Stds/RCs and Asbestos in Soil
- Paul Locke
  - MCP Numeric Stds/RCs
- Sarah Weinstein and Paul Locke
  - Asbestos in Soil

Schedule

- Joint public hearings and same schedule for both public hearing drafts
- Public comment period runs from October 8 through December 10, 2004
  - See *Public Hearing Notice* handout
- 4 Hearings in November
- Final regulations in Spring '05

Public Hearing Drafts may be found…

- http://www.Mass.Gov/dep/bwsc/news.htm
- Boston and regional service centers

MCP Amendments

- Proposals developed to address 1998-99 Draft & Final GEIR recommendations
- Extensive stakeholder input on proposals
- “Pre Public Hearing Draft” published 12/01
- 2004 public hearing draft contains new and modified proposals

Organization of MCP Public Hearing Draft

- Preamble
- Front End
- Public Involvement
- Subparts I & J and Miscellaneous
- Numerical Standards

Front End

Special Projects Permit

- Enhance usefulness of Special Projects permit as redevelopment tool for complex projects/projects with multiple contaminated parcels
- Expand applicants to include “Eligible Persons” (c. 21E) with municipal support
- Expand applicability to deadlines both prior to and after Tier Classification
- Presumptive permit

Front End

RAMS/Construction

- Incorporates Construction Policy approach(2000)
- For areas of contamination adjacent to/in footprint of permanent structure under construction
- Allows "focused" assessment, risk characterization and feasibility evaluation of these areas during building construction
- Requires elimination/control of OHM sources and reduction of concentrations below UCLs, to the extent feasible

Front End

Notification Exemptions

- New exemption for arsenic in Worcester County soils and arsenic and beryllium in Boston Blue Clay that is naturally-occurring, ubiquitous and consistently present
- Revise existing notification exemption for OHM already reported/known to DEP; change from "property" to "disposal site"

Front End

Remedy Operation Status (ROS)

- Expanded to include remedies that employ active monitoring program (e.g., monitored natural attenuation, reactive barriers) can qualify for ROS
- ROS applies to remedies that meet the definition of Active Operation and Maintenance
- Active Operation and Maintenance definition revised to include Active Remedial Systems and Active Monitoring Programs

Front End

Remedy Operation Status

- ROS modification provisions – allow new party to be added to those responsible for ROS
- Provisions for retaining ROS during system shutdown period for purpose of monitoring whether rebound occurs

Front End

Remedial System Monitoring Report (RSMR)

- Improve DEP's ability to track Active Operation and Maintenance of all operating remedies by:
  - Standardizing submissions of system operational and monitoring data
  - Requiring reporting at specific frequencies

Front End

RSMR (cont.)

- Proposed frequencies
  - Monthly for systems addressing IH or SRM
  - Every 3 months for all other Active Remedial Systems or Active Remedial Monitoring Programs with Remedial Additives
  - Annually for Active Remedial Monitoring Programs that don't involve Remedial Additives
- Require electronic submittal
  - *See draft RSMR transmittal form*

Front End

Class C RAO Temporary Solution

- 21E and MCP provide for Temporary Solutions if
  - No feasible Permanent Solution exists or
  - Feasible Permanent Solution exists but implementation of Temporary Solution is more cost effective and timely
- MCP requires the achievement of some type of RAO within 5 years of Tier Classification

  Class A or B = Permanent Solution/NSR

  Class C = Temporary Solution/NSH

Front End

Class C RAO Temporary Solution

- Revisions create two subcategories of Class C RAOs

  C-1 No Permanent Solution Feasible

  - 5 year Periodic Evaluation

  C-2 Permanent Solution Feasible

  - response actions continue under valid permit or Tier II Classification

Front End

Post RAO Actions
Non-AUL Sites

- No additional requirements for work in areas that have achieved No Significant Risk for unrestricted uses (all A-1, A-2, and B-1 RAOs)
- Comply with soil management provisions
- New notification conditions require notification

Front End

Post RAO Actions
AUL Sites

- For work consistent with AUL
  - De-minimus soil excavation, retain records
  - Greater than de-minimus soil or other media
    - » submit RAM Plan
    - » implement (no approvals)
    - » submit Completion Statement
- When Activity/Use Not Allowed by AUL
  - » submit RAM plan
  - » implement (no approvals)
  - » submit Completion Statement
  - » revise AUL and modify RAO

Front End

Numerical Ranking System

- Updates tables which list scores for common chemicals used to determine the "OHM Toxicity Score" and the "Environmental Toxicity Score"

Public Involvement

Enhance Info to Local Officials

- Local officials receive
  - Copy of RNF with a site locus map or assessor's map/parcel numbers
  - Phase I site map in Tier Classification notice
  - Phase report summaries, rather than notice of availability
- public water supply owners notified of sites with groundwater contamination within PWS resource areas prior to submitting Tier I Permit application

Public Involvement

Notice to Local Officials/RAMs

- June 2003 eliminated 21-day presumptive approval for RAMS, but left the requirement that local officials be notified 7 days prior to implementation of RAM
- Propose to require local official be notified “within 7 days prior”

Public Involvement

Informing Property Owners

- Inform owners of right to obtain data if property sampled
- Inform owners and occupants of property of IRA remedial action to address IH or CEP being conducted at their property and of public involvement opportunities

Public Involvement

Informing Property Owners, cont.

- Notify property owners if their property is within disposal site boundaries
- Notify Owners of property(ies) abutting the disposal site
- Both proposals contain provisions
  - to renotify property owners if later assessment shows property is not within/abutting disposal site
  - Use public notice if number of owners/abutters > 50

Public Involvement

Better Notice/More Tailored PI

- Ad in the local news section of the local newspaper replaces legal notices
- Eliminate Environmental Monitor notices currently required for Tier I sites
- Establish process for reducing, expanding or termination PI activities at a Public Involvement Plan site

Sub I&J

Engineered Barrier

- Clarify financial assurance requirements (310 CMR 30.906)
- Make condition for Engineered Barrier use consistent throughout the MCP, “lack of a feasible alternative”
- Seek comment on:
  - prohibiting E.B.s at 1-4 unit residences with highly toxic hazardous materials or any site with chemicals with “lethal effects”
  - requiring P.E. sign off on plans

Sub I&J

Grant of Environmental Restriction – Private Well Closure

- Eliminate Grant of Environmental Restriction requirement for properly abandoned drinking water supply wells
- Seek comment on retaining Notice of Activity and Use Limitation where well is maintained for uses other than as drinking water supply

Sub I&J

Data Usability Documentation

Include in Response Action Outcome -

- Indication as to whether DEP approved analytical methods were used
- Provide data usability assessment that shows data is scientifically valid, of sufficient precision and accuracy, and representativeness to support RAO

Sub I&J

Activity and Use Limitations

- Incorporate forms 1084D and E into regulation (used to terminate AUL because additional response actions are necessary)
- Expand means of proof that a request to marginally reference the AUL on the deed

Numerical Standards

- Next presentation…

Effective Date of Amendments

- DEP seeks comment on options
  - Delay effective date for Numeric Standards and Remedial System Monitoring Report requirements beyond effective date of other provisions
    - » New standards could be applied during this period as DEP published Method 2 standards
  - One effective date for all

Proposed MCP Revisions
Public Hearing Draft

Paul W. Locke

BWSC Advisory Committee
October 7, 2004

Numerical Standards

- Revisions to Method 1 Groundwater and Soil Standards
- Revisions to Method 2 Direct Contact Standards
- Revisions to the Upper Concentration Limits
- Revisions to the Reportable Concentrations and Reportable Quantities
- Revisions to the Human Health & Environmental Toxicity Scores in the Numerical Ranking System

Adding New Chemicals

- 1,4-dioxane
- Perchlorate
- NDMA
- HMX
- RDX

[Simplifying Process, Increasing Consistency]

Toxicity Information Update

- Routine update of chemical-specific toxicity information and physical constants.
- US EPA and other data sources are reviewed for updates to the information used by MA DEP to calculate the standards.

[Updating Science]

GW-1: Dermal & Inhalation Exposure

- For chemicals without published Massachusetts MCLs or ORS Guidelines, the GW-1 standard would incorporate quantitatively the inhalation & dermal contact exposures.

[Updating Science, Simplifying Process, Increasing Consistency (+/-)]

GW-2: Volatilization to Indoor Air

- The standard volatilization model may overestimate indoor air concentrations of petroleum hydrocarbons and underestimate concentrations of chlorinated hydrocarbons.
- Chemical-specific modeling is proposed, rather than applying a generic dilution attenuation factor.

[Updating Science, Correction]

GW-3: Protection of Surface Water Quality

- AWQC and EPA LOAELs do not cover all chemicals and default values may not be sufficiently protective.
- Adjusted for hardness, replace default values with chemical-specific values calculated using AQUIRE values, Tier II values and other published benchmarks. Incorporate additional attenuation factor.

[Updating Science, Increasing Consistency, Correction]

Soil: Simplifying Calculations

- 1993 standards were based on exposures calculated on a year-by-year basis normalized to body weight.
- Adopt approach averaging exposures over specific time periods during a receptor's life. Equations are simplified (at most 3 time periods, rather than 30) and exposures are easily described.

[Simplifying Process, Increasing Consistency]

Soil: Dermal Adherence

- 1993 standards incorporated a Dermal Adherence Factor which is an estimate of how much contaminated soil is in contact with the skin, and thus available for absorption.
- Incorporate recent studies that looked specifically at soil adhering to the skin after certain activities.

[Updating Science, Increasing Consistency]

S-1: Vegetable Gardening

- Residential standards do not specifically incorporate gardening although it is often quantitatively evaluated under Method 3.
- Reviewed Plant Uptake and gardening exposure information published since 1993 and incorporated into S-1

[Updating Science, Increasing Consistency]

S-2/S-3: Subchronic Noncancer Exposures

- Under certain specific circumstances, the risk-based standards for the S-3-type (construction/excavation) exposures are more stringent than for the S-2-type (commercial) exposures.
- When the calculated S-3 standard is lower than the calculated S-2 standard, the S-2 standard is set equal to the S-3 standard.

[Increasing Consistency]

Soil: Ceiling Levels

- In some cases, the calculated risk-based standards may be higher than the saturation point of a chemical in soil.
- The Soil Ceiling Levels will be adjusted to include a chemical's soil saturation level (C_{sat}), consistent with EPA approach.

[Updating Science, Increasing Consistency]

Leaching to Groundwater

- 1993 leaching model contained both errors in implementation and limitations in its application.
- Conducted chemical-specific modeling of the leaching pathway using Monte Carlo distributions of many parameters, including site data from Massachusetts sites.

- [Updating Science, Correction]

Soil Standards

Simplifying Calculations

- Update methodology to incorporate latest studies on dermal adherence of soil
- Update soil background concentrations
- Incorporate chemical-specific soil saturation values in the Soil Ceiling Levels
- Conduct chemical-specific modeling to update the soil-to-groundwater leaching pathway

Effect of MCP Method 1 Standards Changes on Cleanup Goals for Sites

% of *Sites* with increasing (less stringent) and decreasing (more stringent) cleanup goals

Impact = *f*(Δ standards, % of sites)